

**Second Annual Report to Congress:
Evaluation of Medicare's Competitive Bidding Demonstration
For Durable Medical Equipment, Prosthetics, Orthotics, and Supplies**

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Centers for Medicare & Medicaid Services
Baltimore, Maryland

Purpose

Section 1847 of the Social Security Act, as added by section 4319 of Public Law 105-33, the Balanced Budget Act of 1997 (BBA 1997), directs the Secretary of Health and Human Services to report annually on the impact of competitive bidding projects authorized in the BBA. Specifically, section 1847(c)(1) directs the Secretary to “evaluate the impact of the demonstration projects on Medicare program payments, access, diversity of product selection, and quality.” The Secretary is to report annually and no later than 6 months after the demonstrations terminate on December 31, 2002. In accordance with the requirements, the Secretary is hereby submitting the Second Annual Report.

Background

Section 1847 of the Social Security Act authorized the Secretary to conduct Demonstration Projects for Competitive Acquisition of Items and Services. In these projects, Medicare Part B items and services (other than physician services) can be furnished under competitively awarded contracts. The competitions are conducted in competitive acquisition areas, defined under the act as a Metropolitan Statistical Area (MSA) or a smaller area within an MSA. In response to section 1847, the Centers for Medicare & Medicaid Services (CMS) designed and implemented the Competitive Bidding Demonstration for Durable Medical Equipment, Prosthetics, Orthotics, and Supplies (DMEPOS). The demonstration has been implemented in two sites.

In the first site of the demonstration, Polk County, Florida, CMS conducted the first of two rounds of bidding in 1999. Five categories of DMEPOS were put up for bidding: oxygen supplies and equipment (required by statute), hospital beds and accessories, enteral nutrition, urological supplies, and surgical dressings. A total of 16 winning suppliers began providing demonstration products and services in Polk County on October 1, 1999, and continued for 2 years. The second and final round of bidding in Polk County was conducted in 2001 for the same product categories minus enteral nutrition. (Enteral nutrition was dropped to retain only product categories that are overwhelmingly used in private homes.) The second set of competitively bid fees took effect in October 2001. As in round one, 16 suppliers were selected, of whom half participated as winners previously. The new fee schedules developed from the bids in each round replaced the statewide Medicare DMEPOS fee schedule. The current round of the demonstration in Polk County is scheduled to conclude in October 2002.

Texas is the second site of the demonstration. In San Antonio’s Bexar, Comal, and Guadalupe counties, CMS conducted bidding in 2000 for five categories of DMEPOS: oxygen, hospital beds and accessories, wheelchairs and accessories, general orthotics, and nebulizer drugs. Fifty-one suppliers were selected and began serving Medicare beneficiaries under the new fees in February 2001. The San Antonio site will continue operations until December 2002, the statutorily required termination date of the BBA demonstration authority.

The CMS contracted with the University of Wisconsin-Madison in 1998 to conduct the evaluation. The evaluation team consists of the University, the Research Triangle Institute, and Northwestern University. For the First Annual Report, the evaluation activities included a beneficiary survey; five site visits by the team to Polk County, Florida, and to the Medicare carrier managing the project in 1999 and 2000; focus groups in Polk County with suppliers and members of other affected groups; analysis of suppliers' bids and comparison of fee schedules; and review of operational and documentary materials such as ombudsman records and the demonstration Request for Bid Proposals from suppliers.

For the Second Annual Report, the team conducted a followup beneficiary survey in Polk County, enabling assessment of numerous effects of competitive bidding. The team also analyzed the Medicare savings under the second competitively bid fee schedule in Polk and collected information from nine Florida suppliers in a written format. The team traveled to San Antonio for three site visits to interview demonstration and nondemonstration suppliers, referral agents, beneficiary representatives, and the San Antonio demonstration ombudsman. They also analyzed Medicare savings under the competitively bid fee schedule in San Antonio. They held discussions with the San Antonio demonstration contractor, Palmetto Government Benefits Administrators, in Columbia, South Carolina. As in Polk County, a baseline survey was administered to a sample of Texas beneficiaries (the followup survey to enable comparisons will be conducted in 2002). Results in this report pertain to the Polk County site between July 2000 and September 2001 and to the San Antonio site since its selection in spring 2000 through September 2001.

Results of the Evaluation to Date

This evaluation focuses on five major areas of impact:

1. Medicare expenditures;
2. beneficiary access;
3. quality and product selection;
4. market competitiveness; and
5. administrative feasibility of the reimbursement system.

The remainder of this report summarizes the key evaluation findings in each impact area. We continue to find that the demonstration is proceeding smoothly and without serious adverse impacts in any of the evaluation areas. Compared to the already-significant savings estimates for the first round of the Polk demonstration, savings are slightly greater in the second round and in the San Antonio site. However, the full impact of the demonstration cannot be definitively stated until the project ends and all evaluation data are collected. A detailed contractor report on the findings to date, including an executive summary, is attached as an appendix.

Medicare expenditures

The Medicare fees resulting from the two additional bidding competitions that CMS conducted since the First Annual Report again suggest substantial savings are likely from competitive bidding. Our current estimates suggest savings of about 17 percent annually in Polk County's round one, 21 percent in Polk County's round two, and 22 percent in San Antonio's single round. The actual amount of savings depends upon the volume of services in each site, to be determined from claims later in the evaluation. Another factor determining actual savings is the impact of demonstration transition policies allowing payments under the Medicare statewide fee schedule for capped-rental or purchase agreements until the agreements run out. The estimates above are based on volume data for 1998 and 1999, the most recent data available at the time the bidding occurred, and they do not take transition policies into account. However, we do not expect the final savings estimates (forthcoming in next year's evaluation report) to differ markedly from our current ones.

Polk County fees and savings

For each demonstration product or service, the prices bid by winning suppliers were combined to determine the competitively bid Medicare fees. Fees resulting from the second competitively bid fee schedule in Polk County are lower than the fees on the Year 2001 Medicare statewide fee schedule for 7 of 7 oxygen items, 17 of 17 hospital beds and accessories items, 18 of 24 urological items, and 21 of 28 surgical dressings items. Among the six urological items and seven surgical dressings items with fees higher than the Medicare statewide fee schedule, one-half or more are no greater than 20 percent higher. An increase in some fees under competitive bidding may be an indication that cost growth for certain items outpaced general cost increases allowed under the administered fee schedule.

Overall, the new fees are favorable to Medicare (Table 1). The average price reduction for oxygen is 19 percent; for hospital beds and accessories, 34 percent; for urological supplies, 7 percent; and for surgical dressings, 4 percent. These percentage reductions track very closely with our current estimate of percentage savings.

Compared to the fees in round one, fees in round two for oxygen and hospital beds exhibited little change, falling generally within about 5 percent of round one fees. In both categories, dollar savings relative to the statewide fee schedule are about one-third higher than round one savings. Fees in the second round are almost always lower for surgical dressings and all fees are higher for urological supplies. Surgical dressings fees in round one were high due to unintended consequences of the technical procedure for summarizing an individual firm's bid prices. An improved procedure in round two, as expected, has probably helped to lower surgical dressings fees so that most are now below the statewide fee schedule. The annual savings estimate for surgical dressings changed from a loss of about 10 percent to savings of about 4 percent. Fee increases for urological items were generally between 10 and 20 percent. The possibility of a higher level for urological fees was noted in the First Annual Report, which found that once the

Table 1: Average Price Reduction and Estimated Percent Savings, Polk County, Florida, and San Antonio, Texas: Final Period in Each Site

DMEPOS Category	<i>Polk County, Florida</i>		<i>San Antonio, Texas</i>	
	Average Price Reduction (%)	Estimated Percent Savings, Oct. 01-Sept. 02**	Average Price Reduction (%)	Estimated Percent Savings, Feb.02-Dec.02* **
Oxygen Equipment and Supplies	19.4	19.4	21.8	17.7
Hospital Beds & Accessories	34.1	33.2	25.7	27.6
Urological Supplies	7.4	6.8	N/A	N/A
Surgical Dressings	3.8	3.6	N/A	N/A
Wheelchairs & Accessories	N/A	N/A	20.1	23.8
General Orthotics	N/A	N/A	9.5	20.3
Nebulizer Drugs	N/A	N/A	21.4	25.3

* Final period of the San Antonio demonstration is less than 1 year.

** Estimate of percent savings assumes 1999 volume for Polk and 1998 volume for San Antonio.

Notes: (1) The average price reduction indicates the average price decline when comparing the demonstration prices to the prices on the statewide fee schedule for 2001. The percent differs between the average price reduction and the savings because the two calculations use slightly different volume weights. (2) Detailed data comparing round one and round two prices in Polk County can be found in the Appendix, Chapter 2, Section 2.2.2.

demonstration got underway some urological suppliers concluded that they had bid too low to cover costs. As a result of the higher fees, the annual savings estimate changed from 18 percent in round one to 7 percent in round two.

Our total projected savings estimate for both Medicare and Polk County beneficiaries is nearly \$1.5 million for the final year of the Polk demonstration, 21 percent less than what would have been incurred under the Year 2001 Medicare fee schedule. Medicare program outlays account for about 80 percent of this amount, while reductions in beneficiary copayments account for the remaining 20 percent.

San Antonio fees and savings

Demonstration fees resulting from the San Antonio competition conducted in 2000 are lower than the Medicare statewide fee schedule for 10 of 10 oxygen items, 18 of 18 hospital beds and accessories items, 61 of 61 wheelchair and accessories items, 46 of 46

orthotics items, and 16 of 27 nebulizer drugs put up for bidding. The average price reduction for oxygen is 22 percent; for hospital beds, 26 percent; for wheelchairs, 20 percent; for orthotics, 10 percent; and for nebulizer drugs, 21 percent (Table 1). Annual savings estimates are 18, 28, 24, 20, and 15 percent, respectively.

Our total projected savings estimate for both Medicare and San Antonio beneficiaries in the three-county area is \$2.3 million annually, shared in the 80/20 ratio noted earlier.

Access to DMEPOS goods and services

Results of the beneficiary surveys in Florida indicate that the demonstration has had little impact on DMEPOS users' access to care. Separate surveys were administered to oxygen users and users of the other types of medical equipment put up for bidding. The mail questionnaires contained a wide range of measures dealing with access to equipment, training, maintenance, customer service, and delivery services. Responses collected before the demonstration were compared with responses after the demonstration. The impact estimates take into account general trends that might affect responses (by analyzing a comparison survey in a nonparticipating Florida county, Brevard). The estimates also control for differences in the demographic composition and health status of the random samples of respondents.

The survey measures overall indicate that access remains strong for beneficiaries under the demonstration in Polk County. For example, oxygen patients continued to report little or no wait for deliveries, and medical equipment users reported similar delivery times at baseline and followup. Access information for San Antonio in this report is based on several site visits by the evaluation team, who uncovered little in the way of systematic problems.

Polk County oxygen users' access

Although the vast majority of access indicators indicated stability, one that warrants monitoring is a reported decline in the proportion receiving portable oxygen as part of their oxygen service. Portable oxygen is necessary for certain patients to move more freely about their home and to travel outside the home. Among all oxygen patients, the decline in portable oxygen use was moderate (-10%) and did not attain statistical significance. However, among the subgroup of new users (respondents who have been using the equipment a year or less) the decline was substantial (-34%) and statistically significant ($p=.025$). New oxygen users are likely to be more affected by the demonstration than oxygen patients overall because of the project's transition provisions—rules allowing continuing oxygen users to maintain their former supplier relationships. Access to portable oxygen can be important for quality-of-life reasons. Pending further data collection and analysis by the evaluation team, it is not clear whether the decline in portable oxygen is a result of cost-saving behavior among suppliers or some other behavioral change on the part of suppliers, beneficiaries, or physicians. It is worth noting that new users also reported an increase in the provision of oxygen conserving devices (+114%, $p=.017$), which is an efficiency measure that a

supplier might wish to implement in order to save costs. Oxygen-conserving devices have little impact on beneficiary access or quality.

New oxygen users also reported statistically significant improvements in a couple of access indicators, such as receiving instruction from the supplier in how to get after-hours assistance (+25%, $p=.025$).

Polk County medical equipment users' access

Access indicators for medical equipment users also remained mostly unchanged. A possible exception is the procurement process for beneficiaries. For several subgroups (new users of medical equipment and hospital bed users, as well as oxygen users), parties other than the beneficiary and the supplier were more frequently involved in ordering and delivering the equipment under the demonstration. For example, new medical equipment users were less likely to have had their initial order delivered by the supplier. Whether this indicates unfavorable change in access to care and/or quality is not certain. Hypothetically, a change in delivery source might be associated with a decline in certain other indicators, particularly training received from the supplier upon delivery. However, for the variety of training indicators on the survey, generally this was not the case for these subgroups or others. Part of the explanation for a shift away from supplier delivery may be that mail delivery for supplies such as surgical dressings and urological items is finding increasing use as a cost-saving measure.

Another, possibly related, survey finding is that new users of medical equipment reported a reduction in maintenance visits in the past 30 days, and surgical dressings users reported on average a substantial reduction in the number of contacts with the supplier in the past 6 months. These results may be a byproduct of the location of some winning suppliers outside of Polk County. Whether this reflects unfavorably on competitive bidding is not clear, because some contacts are generated by equipment problems. It is notable that these results accompany findings of improved product reliability and shortened response time, according to the responses from surgical dressings users.

Inferential data on access come from information on service areas. In Polk, CMS required all winners in round two to serve the entire demonstration area, potentially easing access beyond the requirements imposed in round one.

San Antonio site visit results

During site visits to San Antonio at 3 and 7 months after new prices went into effect, the evaluation team gathered perspectives on access from suppliers, referral agents, and beneficiary groups. These informants reported few systematic problems. Most access concerns surrounded the early transition period, when agents were pressured to become familiar quickly with the capabilities of a new list of approved suppliers and to learn to work with them. Although this led to some delays in delivery, informants expected the problems to subside.

As noted in our First Annual Report, the mostly favorable access findings appear related to several demonstration features. First, the design provided for multiple winners in each product category. Second, winner selection procedures explicitly considered bidders' capacity and service capabilities. Third, transition policies allowed relationships to continue between users of some equipment and their pre-demonstration suppliers. In addition, 80 percent of winning suppliers in San Antonio agreed to serve the entire three-county demonstration site.

Quality and product selection

The beneficiary surveys in Florida indicate that quality has not deteriorated under the demonstration. Site visits to San Antonio uncovered anecdotal information suggesting mixed results on quality, but at this time results are not definitive.

Polk County survey results

As with the measurement of access, a wide range of measures were developed from the survey to measure quality, such as overall satisfaction, equipment reliability, and quality of training and service. Very few indicators exhibited statistically significant change, and when they did they favored the demonstration. For example, new oxygen users reported a decline in the number of major equipment problems they experienced in the past 6 months. A summary measure of customer satisfaction comes from a question asking respondents to rate their supplier on a scale of 1 to 10 (with 10 representing the highest rating). Results showed that the ratings of oxygen users and equipment users as a whole did not change significantly. Quality ratings averaged about 9.25 for oxygen users and slightly less for medical equipment users. Analysis of new users revealed a decline in the proportion that offered the highest rating, but this was not statistically significant.

Urological patients are of special interest because of indications from early visits to Florida of potential quality problems. When we isolated their survey results, we found no increase in quality problems in Polk County.

San Antonio site visit results

Mixed results on quality in San Antonio to date are based on nonstatistical data collected during site visits to San Antonio. On the one hand, referral agents contacted by the evaluation team have not noticed changes in amount of paperwork, timeliness, or general service and equipment quality. Very limited data on product selection so far do not provide evidence of deterioration in quality. On the other hand, several referral agents reported encountering service problems such as improper wheelchair adjustments, lack of appropriate followthrough on malfunctioning equipment, and inaccurate orders. These referral agents now avoid the suppliers associated with the wheelchair problems. This finding recalls last year's site visit results from Polk County. There, unfamiliar with the delivery and service practices of some winning firms, some referral agents indicated they had to learn by trial and error which ones met their expectations and which ones didn't. They would then use their experience to be selective in making referrals in the future.

Whether these reports reflect systematic quality problems in San Antonio is unclear pending further data collection and analysis. More complete data on quality and product diversity will be available after we conduct the second round of the beneficiary survey in San Antonio, to be reported next year.

Market competitiveness

Although the 3-year demonstration does not bear evaluation of long-term effects on market competition, several observations and site visit results from the evaluation team generally suggest sustained competitiveness in the Polk County market so far. In San Antonio, the first bidding competition attracted a large number of bids, potentially foreshadowing a healthy competitive Medicare market under the new prices.

Polk County

In the second round of bidding in Polk County, bidders numbered 26—only 4 fewer than in the first round, despite the reduction in product categories from 5 to 4. There were 22 bidders for oxygen, 19 for hospital beds, 7 for urological supplies, and 4 for surgical dressings. Two product categories experienced declines in bidders—urological supplies and surgical dressings. With relatively low total revenues at stake in these categories, the declines raise the possibility that, to encourage sufficient competition, future bidding designs may need modifications to avoid small numbers of competitors. In addition, it is possible that low profit margins contributed to the small number of urologicals bidders; low profit margins in this category were reported by some suppliers to be a problem, according to site visit information collected for the First Annual Report to Congress.

In both Polk County bidding rounds, there were a total of 16 winners. Entry into and exit from the market were demonstrated in the second round: half of the round two demonstration suppliers had demonstration status in round one, but half did not. The new winners did not represent a disproportionate number of nonlocal suppliers, relative to the group of winners from the first round of bidding. Two of the new winners had lost the competition in the first round, a possible indication that they learned how to be successful from their earlier experience.

Business and financial data from a small sample of Polk County suppliers suggest that some of the demonstration suppliers are enjoying increased volume. Of these, some also report increased revenues, notwithstanding the price reductions brought by competitive bidding. The sample, however, is not necessarily representative. These same winning suppliers tended to perceive the Polk County market as being more competitive as a result of the demonstration.

San Antonio

In San Antonio, the bidding competition attracted a large number of bidders. In all, 79 suppliers submitted a total of 169 bids across the 5 product categories in the bidding competition held in 2000. Oxygen, hospital beds, and wheelchairs each generated more

than 40 bids, and nebulizer drugs drew 33 bids. There were only 14 bids for general orthotics, the category with the lowest total allowed charges. A total of 51 firms won supplier status. There were 32, 24, 23, 8, and 11 winners in the oxygen, hospital bed, wheelchair, orthotics, and nebulizer drug categories, respectively. (A firm could win in more than one category.) Although there are no hard data yet on the competitiveness of the DMEPOS market under the San Antonio demonstration, the significant numbers of approved suppliers suggest that competition for beneficiaries' patronage, based on quality and service, will be healthy. Indeed, a few suppliers planned marketing changes after learning that they won.

Discussions with suppliers revealed mixed opinions about how competitive bidding might eventually affect market competitiveness. With varying reliance on Medicare revenues, not all suppliers felt their survival is threatened by Medicare bidding. This is a good sign for the long-term competitiveness of the local market.

A supplier survey later this year will yield additional data about the demonstration's impact on market competitiveness, as will site visits and claims analysis.

Administrative feasibility of the reimbursement system

The evaluation of administrative feasibility addresses the ease of implementing the process of competitive bidding and of administering the post-bidding phases, including the transition to approved suppliers, new reimbursement procedures, and site monitoring. In the Second Annual Report, the evaluation focuses on feasibility evidence from San Antonio. The evaluation also considers the net savings from competitive bidding after accounting for administrative costs. The team's analysis suggests competitive bidding promises even more savings from programs larger in scale than the experiments conducted so far.

Implementation in San Antonio

San Antonio's demonstration is somewhat larger than Polk's. It involves two of the original five product categories and three new categories. The CMS implemented the San Antonio experiment in much the same way as it did in Polk County. Publicity, education of beneficiaries and other stakeholders, bidder notification and education, designation of an ombudsman, and other aspects of site preparation generally proceeded smoothly. Bid analysis was approached slightly differently from the process in Polk; to streamline the process, a special expert panel was convened to evaluate the financial status of the bidders separately. Despite this operational improvement, CMS's inexperience with the larger scale of operations probably contributed to a 1-month departure from the originally planned starting date of January 1, 2000, as well as a delay in distributing the directory of approved suppliers. The late directory was cited by referral agents as a contributor to difficulties they had in transitioning to the new system early in the San Antonio experiment. This suggests that in future site planning, CMS might need to allow more time for the consumer side of the market to prepare.

Program Savings Net of Costs Incurred

In order to make inferences about potential future returns to competitive bidding, the evaluation team gathered data on administrative costs of the demonstration. Costs of administering the demonstration are estimated to be \$4.8 million (in Year 2000 dollars). These costs cover research and development activities begun in 1995, subsequent public and supplier education, bidding and bid evaluation, modifications to claims processing, and ongoing site monitoring until project termination in December 2002. Total estimated savings in the two demonstration sites since October 1999, when the first competitive bid fees became effective in Polk County, through termination, is \$8.5 million. This amount is about 20 percent below the estimate of expenditures that would have been incurred under the statewide fee schedules, assuming unchanged utilization. Net savings of the entire project are therefore now estimated at \$3.7 million (a figure incorporating all developmental activities and assuming existing personnel assigned to the project represent an entirely new cost to the government).

Spreading the large fixed-cost component of the project over additional sites would likely increase the return substantially. As illustration, the evaluation team estimates the cost of adding the San Antonio site was \$510,000 over 3 years, versus estimated savings of approximately \$4.4 million in San Antonio for the same period. The actual net savings from adding more sites would depend on factors such as the size and competitiveness of the market in the additional sites, and the particulars of bidding design and administration.

Conclusion

The broad variety of data in this interim report suggest that competitive bidding, as tested in Polk County and San Antonio, can meet Medicare's objectives in terms of program savings, maintaining access and quality, preserving competition in DMEPOS markets, and administrative feasibility. Net savings estimates for Medicare after accounting for program costs are substantial, and they could grow with program enlargement. Overall, access and quality remain strong, although the Polk County survey and site visits in San Antonio uncovered some specific issues that bear continued monitoring. A second round of bidding in Polk County was successful, pointing to a healthy DMEPOS market in the area. The CMS has demonstrated a workable competitive bidding design and feasible operating procedures and policies.

Yet the evaluation will not be complete until a number of important research activities are carried out over the remainder of this year. These include beneficiary and supplier surveys in San Antonio, claims analysis, further bid analysis, and continued site monitoring. After all the data are in, we will make a final assessment and recommendations in the third Report to Congress, due next year.